

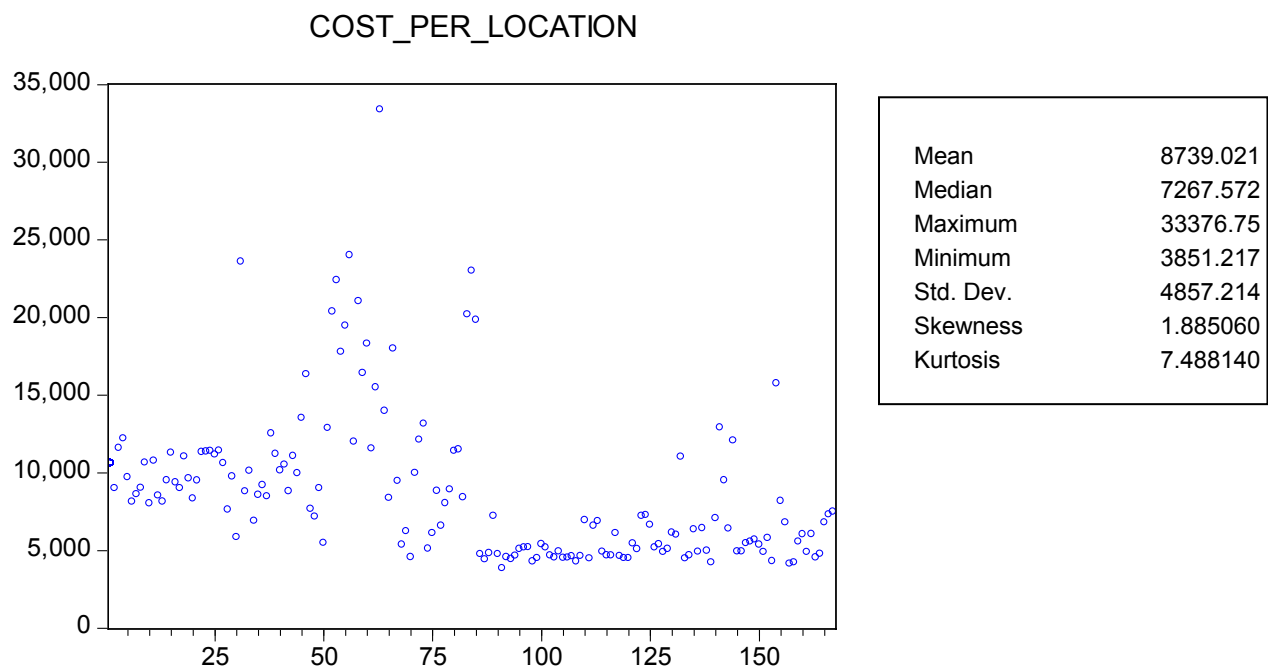
The charts below illustrate the relationship between the dependent variable and each of the independent variables in the regression equation determined by the Nebraska Independent Companies' Capital Expenditure Study. The regression equation was specified as:

$$\frac{\text{Cost}}{\text{Household}} = [3,072] + \left[\frac{13,365}{\text{Linear Density}} \right] - [0.8867 * \text{Households}] + [25.04 * \text{Frost Index}] \\ + [17,700 * \text{Wetlands Pct.}] + [1,376 * \text{Soils Texture}] \\ + [165.40 * \text{Road Intersect. Freq.}]$$

As it is evident from the scattergrams below

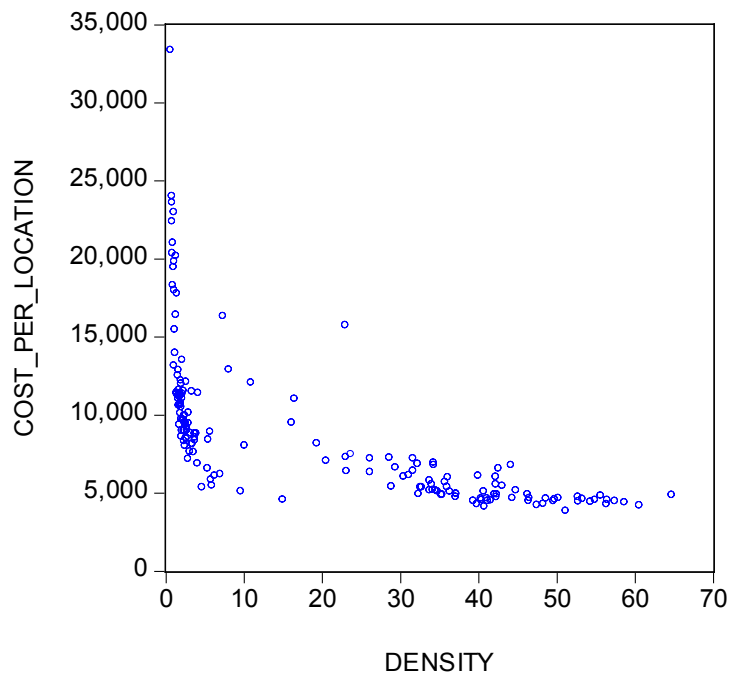
- The strongest relationship exists between cost per household and linear density (households per road miles), therefore density is by far the most important determinant of cost.
- The Soil Texture variable does not show a strong correlation with Cost, even though the variable is significant in the regression. As identified previously by the Nebraska Rural Independent Companies, further refinement of this variable is necessary.

Dependent Variable: Construction Cost per Household

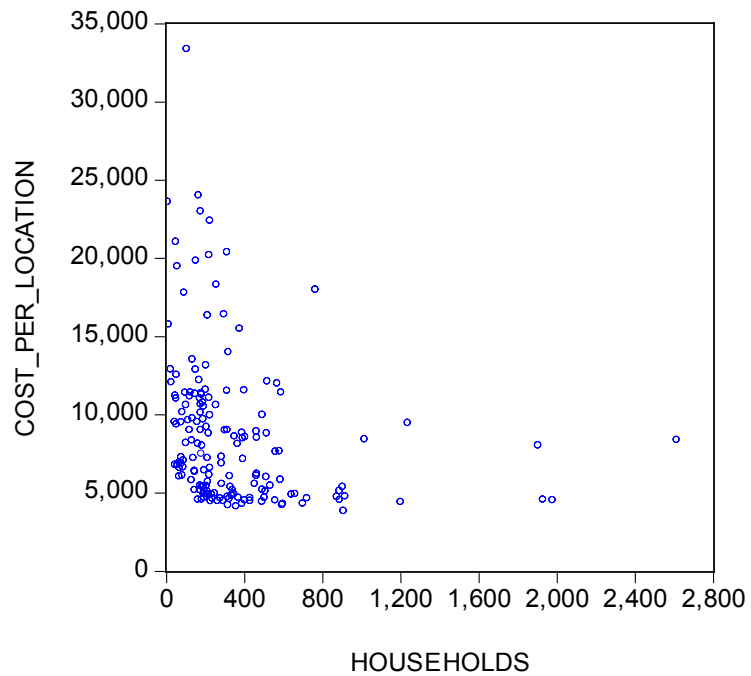


The horizontal axis shows the individual numbered observations.

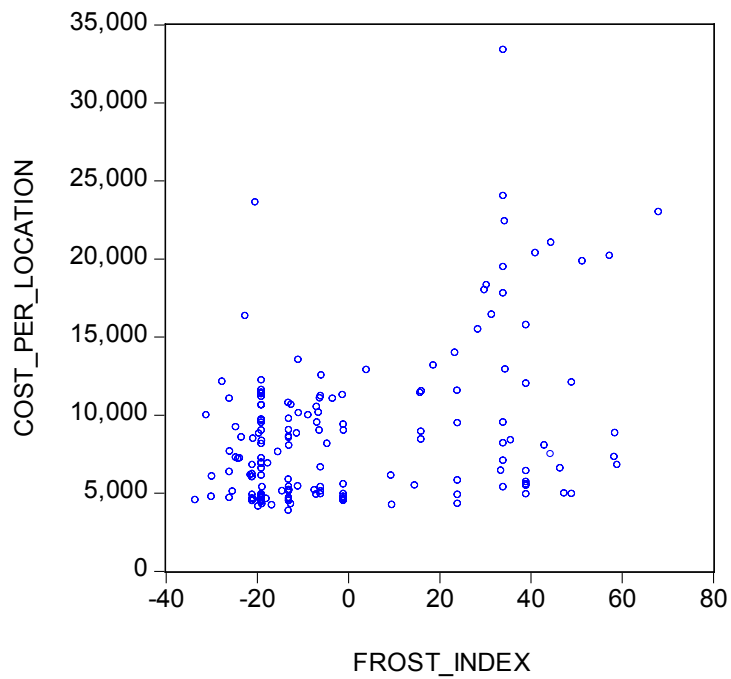
Construction Cost per Household (COST_PER_LOCATION) by Households per Road Mile (DENSITY)



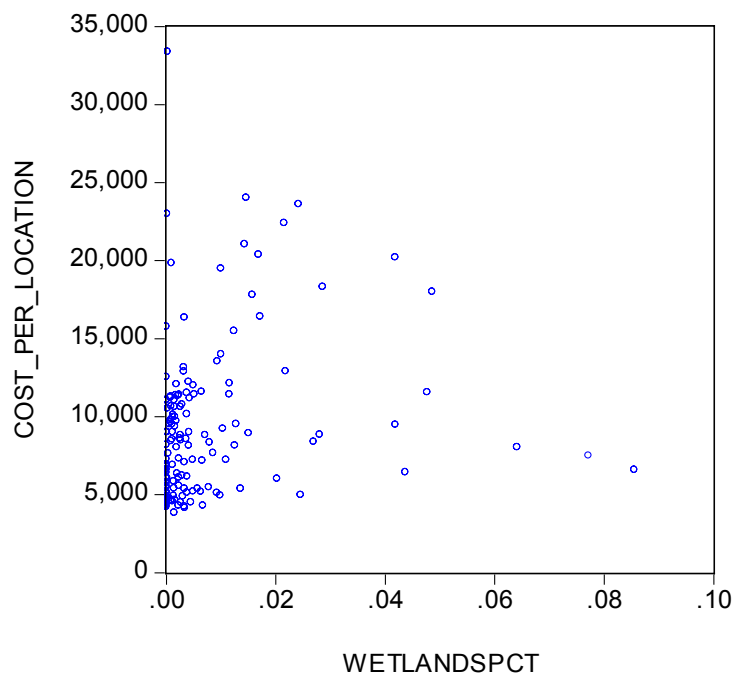
Construction Cost per Household (COST_PER_LOCATION) by Households (HOUSEHOLDS)



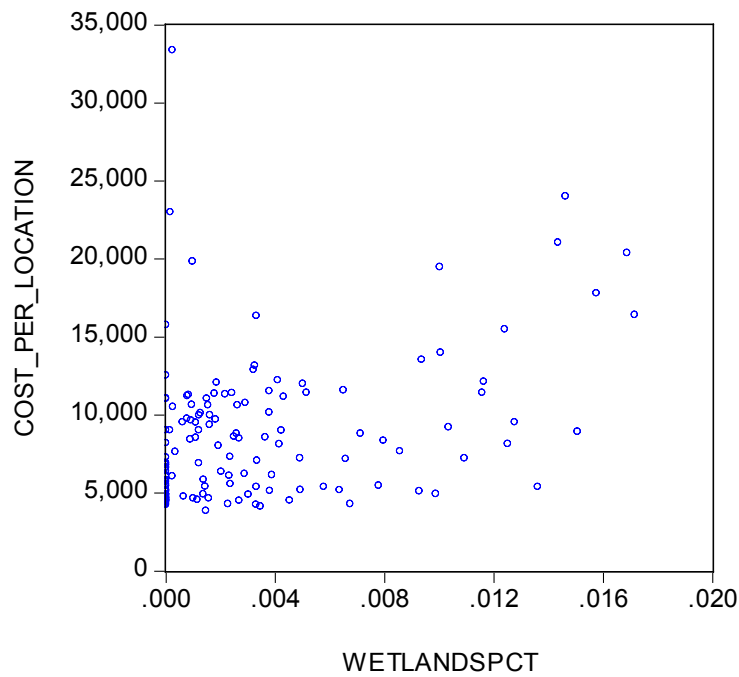
Construction Cost per Household (COST_PER_LOCATION) by Frost Index (FROST_INDEX)



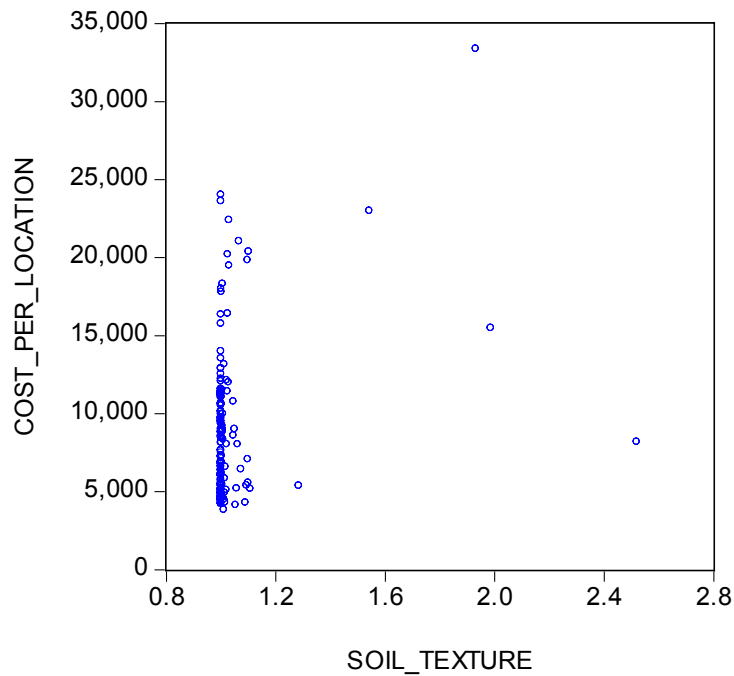
Construction Cost per Household (COST_PER_LOCATION) by the Ratio of Wetland Miles to Route Miles (WETLANDPCT)



Construction Cost per Household (COST_PER_LOCATION) by the Ratio of Wetland Miles to Route Miles (WETLANDPCT) - zoomed in



Construction Cost per Household (COST_PER_LOCATION) by Soil Texture (SOIL_TEXTURE)



Construction Cost per Household (COST_PER_LOCATION) by the Number of Road Intersections per Route Mile (ROAD_INTERSEC_FREQ)

